

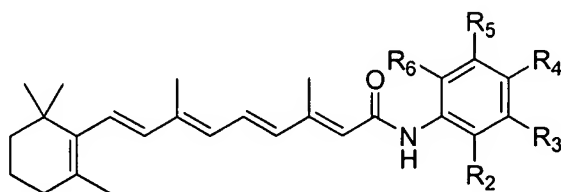
Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-4 (Canceled)

Claim 5. (Currently Amended) An arylretinamide for inducing apoptosis in a cancer cell, said arylretinamide having Structure A, B, or C below:



Structure A

wherein

R₂ is H, OH, NO₂, CH₂ OH, a halide, or an alkyl comprising 1-4 carbon atoms,

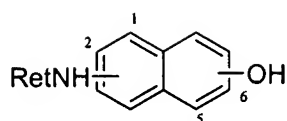
R₃ is H, OH, NO₂, CO₂CH₃, CO₂CH₂CH₃, CO₂(CH₂)₂CH₃, CO₂(CH₂)₃CH₃, CO₂H, CH₂OH, a halide, or an alkyl comprising 1-4 carbon atoms;

R₄ is H, OH, OCH₃, OCH₂CH₃, O(CH₂)₂CH₃, O(CH₂)₃CH₃, SO₂CH₃, SO₂CH₂CH₃, SO₂(CH₂)₂CH₃, SO₂(CH₂)₃CH₃, NH₂, NHCOCH₃, NHCOCH₂CH₃, NHCO(CH₂)₂CH₃, NHCO(CH₂)₃CH₃, NHCOCF₃, N₃, NCS, NO₂, a halide, an alkyl comprising 1-4 carbon atoms, or NHCOCH₂X, wherein X is a halide;

R₅ is H, NO₂, C(CH₃)₃, C(CH₂CH₃)₃, C((CH₂)₂CH₃)₃, C((CH₂)₃CH₃)₃, CO₂CH₃, CO₂CH₂CH₃, CO₂(CH₂)₂CH₃, CO₂(CH₂)₃CH₃, a halide, or an alkyl comprising 1-4 carbon atoms, and

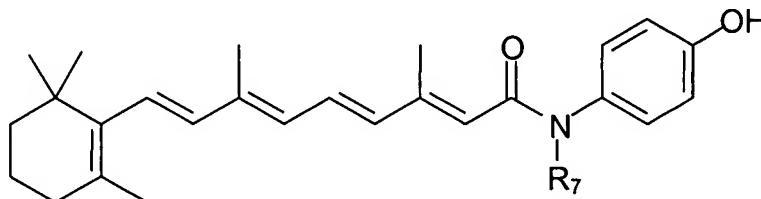
R₆ is H, CO₂H, CO₂CH₃, CO₂CH₂CH₃, CO₂(CH₂)₂CH₃, CO₂(CH₂)₃CH₃, a halide or an alkyl comprising 1-4 carbon atoms;

provided however that when R₂, R₃, [[R₄]] R₅, and R₆ are all H, R₄ is not OH or OCH₂CH₃; and also provided that when R₃, R₅, and R₆ are all H, and R₂ is OH, R₄ is not CO₂CH₃.



Structure B

wherein the OH group is at position 2,4, or 5 when the retinamido group is at linked to position 1, and the OH group is at position 3 when the retinamido group is linked to position 2.



Structure C

wherein R₇ is C₁ to C₄ alkyl.

Claim 6. (Withdrawn) The arylretinamide of claim 5 wherein the arylretinamide is a halohydroxyphenyl retinamides which comprises a phenyl moiety that is optionally substituted with an alkyl group .

Claim 7. (Original) The arylretinamide of claim 6 wherein the phenyl moiety is substituted with a methyl group.

Claim 8. (Withdrawn) The arylretinamide of claim 6 wherein the halo group is an iodo group.

Claim 9. (Withdrawn) The arylretinamide of claim 5 wherein the arylretinamide is a hydroxy-alkylphenyl retinamides or hydroxy-alkoxyphenyl retinamide, wherein the alkyl groups attached to the phenyl moiety comprise from 1 to 4 carbon atoms.

Claim 10. (Withdrawn) The arylretinamide of claim 9 wherein the arylretinamide is a hydroxy-methylphenyl or hydroxy-methoxyphenyl retinamide.

Claim 11. (Original) The arylretinamide of claim 5 is a hydroxy-nitrophenyl retinamides or alkylsulfonyl-hydroxy retinamides.

Claim 12. (Withdrawn) The arylretinamide of claim 11 wherein the arylretinamide is an ethylsulfonyl-hydroxy, retinamides.

Claim 13. (Withdrawn) The arylretinamide of claim 5 wherein the arylretinamide is a hydroxy-naphthylphenyl retinamide.

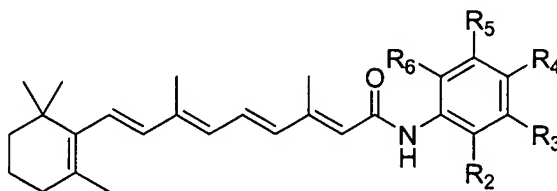
Claim 14. (Withdrawn) The arylretinamide of claim 5 wherein the arylretinamide is an N-alkyl(hydroxyphenyl) retinamides.

Claim 15. (Withdrawn) The arylretinamide of claim 5 wherein the arylretinamide is an aminophenyl retinamides.

Claim 16. (Original) The arylretinamide of claim 5 wherein the arylretinamide is an alkylhydroxyphenyl retinamides.

Claim 17. (Withdrawn) The arylretinamide of claim 5 wherein the arylretinamide is a carboxy-hydroxyphenyl retinamides selected from the group consisting of *N*-(2'-hydroxy-3'-carboxymethylphenyl)retinamide, *N*-(2'-hydroxy-3'-carboxyphenyl)retinamide, *N*-(2'-hydroxy-6'-carboxymethylphenyl)retinamide, *N*-(2'-hydroxy-6'-carboxyphenyl)retinamide, *N*-(3'-hydroxy-4'-carboxymethylphenyl)retinamide, *N*-(3'-hydroxy-4'-carboxyphenyl)retinamide, *N*-(2'-hydroxy-5'-carboxymethylphenyl)retinamide, *N*-(2'-hydroxy-4'-carboxyphenyl)retinamide, *N*-(4'-hydroxy-3'-carboxymethylphenyl)retinamide, and *N*-(4'-hydroxy-3'-carboxyphenyl)retinamide.

Claim 18. (Currently Amended) An arylretinamide having Structure A below



Structure A

wherein

R₂ is H, OH, NO₂, CH₂ OH, a halide, or an alkyl comprising 1-4 carbon atoms,

R₃ is H, OH, NO₂, CO₂CH₃, CO₂CH₂CH₃, CO₂(CH₂)₂CH₃, CO₂(CH₂)₃CH₃, CO₂H, CH₂OH, a halide, or an alkyl comprising 1-4 carbon atoms;

R₄ is H, OH, OCH₃, OCH₂CH₃, O(CH₂)₂CH₃, O(CH₂)₃CH₃, SO₂CH₃, SO₂CH₂CH₃, SO₂(CH₂)₂CH₃, SO₂(CH₂)₃CH₃, NH₂, NHCOCH₃, NHCOCH₂CH₃, NHCO(CH₂)₂CH₃, NHCO(CH₂)₃CH₃, NHCOCF₃, N₃, NCS, NO₂, + a halide, an alkyl comprising 1-4 carbon atoms, or NHCOCH₂X, wherein X is a halide;

R₅ is H, NO₂, C(CH₃)₃, C(CH₂CH₃)₃, C((CH₂)₂CH₃)₃, C((CH₂)₃CH₃)₃, CO₂CH₃, CO₂CH₂CH₃, CO₂(CH₂)₂CH₃, CO₂(CH₂)₃CH₃, a halide, or an alkyl comprising 1-4 carbon atoms, and

R₆ is H, CO₂H, CO₂CH₃, CO₂CH₂CH₃, CO₂(CH₂)₂CH₃, CO₂(CH₂)₃CH₃, a halide, or an alkyl comprising 1-4 carbon atoms;

provided that when R_2 , R_3 , $[[R_4,]]$ R_5 , and R_6 are all H, R_4 is not OH OCH₃, OCH₂CH₃, or O(CH₂)₂CH₃; and also

provided that when R_3 , R_5 , and R_6 are all H, and R_2 is OH, R_4 is not CO₂CH₃ or CO₂CH₂CH₃.

Claim 19. (Original) A method of inducing apoptosis in a cancer cell comprising contacting the cancer cell with an arylretinamide of claim 1.

Claim 20. (Original) A method of treating cancer in a subject in need of said treatment, comprising administering one or more arylretinamides of claim 1 to the subject.

Claim 21. (Withdrawn) The method of claim 20 wherein said method further comprises administering calcium glucarate to the subject.